

Title (en)

Cobalt substituted chromium oxide compositions, their preparation and their use as catalysts and catalyst precursors

Title (de)

Kobalt-substituiertes Chromoxid enthaltende Zusammensetzungen, ihre Herstellung und ihre Verwendung als Katalysator und Katalysatorvorläufer

Title (fr)

Composition d'oxyde de chrome a substitution cobalt, préparation de ces compositions et utilisation de ces compositions en tant que catalyseurs et précurseurs de catalyseurs

Publication

**EP 1539347 B1 20120627 (EN)**

Application

**EP 03793281 A 20030821**

Priority

- US 0326326 W 20030821
- US 40522002 P 20020822

Abstract (en)

[origin: WO2004018093A2] A crystalline alpha-chromium oxide where from about 0.05 atom % to about 6 atom % of the chromium atoms in the alpha-chromium oxide lattice are replaced by trivalent cobalt (Co<sup>+3</sup>) atoms is disclosed. Also disclosed is a chromium-containing catalyst composition comprising as a chromium-containing component the crystalline cobalt-substituted alpha-chromium oxide; and a method for preparing a composition comprising the crystalline cobalt-substituted alpha-chromium oxide. The method involves (a) co-precipitating a solid by adding ammonium hydroxide to an aqueous solution of a soluble cobalt salt and a soluble trivalent chromium salt that contains at least three moles of nitrate per mole of chromium in the solution and has a cobalt concentration of from about 0.05 mole % to about 6 mole % of the total concentration of cobalt and chromium in the solution; and after at least three moles of ammonium per mole of chromium in the solution has been added to the solution, (b) collecting the co-precipitated solid formed in (a); (c) drying the collected solid; and (d) calcining the dried solid. Also disclosed is a chromium-containing catalyst composition comprising a chromium-containing component prepared by treating the crystalline cobalt-substituted alpha-chromium oxide with a fluorinating agent; and a process for changing the fluorine distribution (i.e., content and/or arrangement) in a hydrocarbon or halogenated hydrocarbon in the presence of a catalyst. The process involves using as the catalyst a composition comprising the crystalline cobalt-substituted alpha-chromium oxide and/or the treated cobalt-substituted alpha-chromium oxide.

IPC 8 full level

**B01J 23/26** (2006.01); **C01G 37/02** (2006.01); **B01J 23/86** (2006.01); **B01J 27/06** (2006.01); **B01J 27/132** (2006.01); **B01J 37/03** (2006.01); **C07B 39/00** (2006.01); **C07B 61/00** (2006.01); **C07C 17/00** (2006.01); **C07C 17/08** (2006.01); **C07C 17/10** (2006.01); **C07C 17/20** (2006.01); **C07C 17/21** (2006.01); **C07C 17/23** (2006.01); **C07C 17/25** (2006.01); **C07C 17/358** (2006.01); **C07C 17/37** (2006.01); **C07C 19/08** (2006.01); **C07C 21/18** (2006.01); **B01J 35/00** (2006.01); **B01J 35/10** (2006.01); **B01J 37/02** (2006.01)

CPC (source: EP US)

**B01J 23/864** (2013.01 - EP US); **B01J 37/03** (2013.01 - EP US); **C07C 17/00** (2013.01 - EP US); **C07C 17/08** (2013.01 - EP US); **C07C 17/10** (2013.01 - EP US); **C07C 17/20** (2013.01 - EP US); **C07C 17/206** (2013.01 - EP US); **C07C 17/21** (2013.01 - EP US); **C07C 17/23** (2013.01 - EP US); **C07C 17/25** (2013.01 - EP US); **C07C 17/358** (2013.01 - EP US); **C07C 17/37** (2013.01 - EP US); **B01J 35/30** (2024.01 - EP US); **B01J 35/613** (2024.01 - EP US); **B01J 37/0236** (2013.01 - EP US)

Designated contracting state (EPC)

BE DE GB NL

DOCDB simple family (publication)

**WO 2004018093 A2 20040304**; **WO 2004018093 A3 20040422**; AU 2003265591 A1 20040311; CN 100464840 C 20090304; CN 1713956 A 20051228; EP 1539347 A2 20050615; EP 1539347 B1 20120627; JP 2005536424 A 20051202; JP 5133500 B2 20130130; RU 2005107797 A 20050827; RU 2318594 C2 20080310; US 2005228202 A1 20051013; US 7217678 B2 20070515

DOCDB simple family (application)

**US 0326326 W 20030821**; AU 2003265591 A 20030821; CN 03819923 A 20030821; EP 03793281 A 20030821; JP 2004529843 A 20030821; RU 2005107797 A 20030821; US 52322805 A 20050131